

IA97 Rec'd PCT/PTO 01 MAR 2006

PTO-1390 (Rev. 07-2005)

Approved for use through 3/31/2007. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A SUBMISSION UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER 05-499-B U.S. APPLICATION No. (If known, see 37 CFR 1.5) 10/570114
INTERNATIONAL APPLICATION NO. PCT/KR2004/002476	INTERNATIONAL FILING DATE 24 September 2004	PRIORITY DATE CLAIMED 01 October 2003
TITLE OF INVENTION COMPACT THERMAL EXCHANGE UNIT OF THERMO-ELECTRIC COOLING MODE USING HEAT PIPE		
APPLICANT(S) FOR DO/EO/US Dong Gyu LEE		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a submission under 35 U.S.C. 371.		
2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371.		
3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371 (f)). The submission must include items (5), (6), (9) and (21) indicated below.		
4. <input type="checkbox"/> The US has been elected (Article 3).		
5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2))		
a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).		
b. <input checked="" type="checkbox"/> has been communicated by the International Bureau.		
c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).		
6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2)).		
a. <input type="checkbox"/> is attached hereto.		
b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).		
7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))		
a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau),		
b. <input type="checkbox"/> have been communicated by the International Bureau.		
c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.		
d. <input checked="" type="checkbox"/> have not been made and will not be made.		
8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).		
9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4))		
10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).		
Items 11 to 20 below concern documents or information included:		
11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.		
12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.		
13. <input type="checkbox"/> A preliminary amendment.		
14. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.		
15. <input type="checkbox"/> A substitute specification.		
16. <input type="checkbox"/> A power of attorney and/or change of address letter.		
17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.		
18. <input checked="" type="checkbox"/> second copy of the published International Application under 35 U.S.C. 154(d)(4).		
19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).		

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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U.S. APPLICATION NO. (if known, see 37 CFR 1.5) 10/5/0114		INTERNATIONAL APPLICATION NO. PCT/KR2004/002476		ATTORNEY'S DOCKET NUMBER 05-499-B	
20. Other items or information: International Search Report and Written Opinion of the ISA/KR Return Postcard Filing Fee Check					
The following fees have been submitted				CALCULATIONS PTO USE ONLY	
21. <input checked="" type="checkbox"/> Basic national fee (37 CFR 1.492(a))\$300				\$	300.00
22. <input checked="" type="checkbox"/> Examination fee (37 CFR 1.492(c)) If the written opinion prepared by ISA/Us or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)\$0 All other situations\$200				\$	200.00
23. <input checked="" type="checkbox"/> Search fee (37 CFR 1.492(b)) If the written opinion prepared by ISA/Us or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)\$0 Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority\$100 International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the USA by the IB\$400 All other situations\$500				\$	400.00
TOTAL OF 21, 22 and 23 =				\$	900.00
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing in an electronic medium) 37 CFR 1.492(jj) The fee is \$250 for each additional 50 sheets of paper or fraction thereof.					
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole number)	RATE		
9	-100 =	/50 =	x \$250	\$	
Surcharge of \$130.00 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h)).				\$	130.00
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	1	-20 =	x \$50	\$	
Independent claims	1	-3 =	x \$200	\$	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)				\$	
TOTAL OF ABOVE CALCULATIONS =				\$	1,030.00
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.					
SUBTOTAL =				\$	1,030.00
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).				\$	
TOTAL NATIONAL FEE =				\$	1,030.00
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$	
TOTAL FEES ENCLOSED =				\$	1,030.00
Amount to be refunded:				\$	
Amount to be charged:				\$	

10/570114

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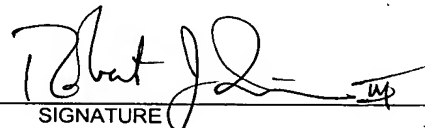
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- a. ☒ A check in the amount of \$ 1,030.00 to cover the above fees is enclosed.
- b. ☐ Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees.
A duplicate copy of this sheet is enclosed.
- c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 13-2490. A duplicate copy of this sheet is enclosed.
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NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:
McDONNELL BOEHNEN HULBERT & BERGHOFF LLP
300 South Wacker Drive
Chicago, Illinois 60606
(312) 913-0001 Telephone
(312) 913-0002 Facsimile

Dated: March 1, 2006


SIGNATURE
Robert J. Irvine, III
NAME
41,865
REGISTRATION NUMBER

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)
(Case No. 05-499-B)

In the Application of:)
)
Dong Gyu LEE)
)
U.S Application No.: TBA)
International Appln No. PCT/KR2004/002476)
)
International Filing Date: 24 September 2004)
)
For: Compact Thermal Exchange Unit of)
Thermo-Electric Cooling Mode Using)
Heat Pipe)

CERTIFICATE OF MAILING BY "EXPRESS MAIL"

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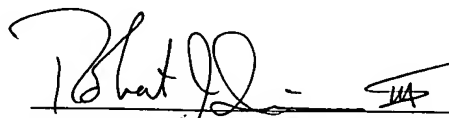
Sir:

Date of Deposit: **March 1, 2006** "Express Mail" Mailing Label Number: **EV757087992US**

Attached Paper or Fee:

- 1) Transmittal to the DO/EO/US (3 sheets)
- 2) Application Data Sheet (2 sheets)
- 3) Copy of the International Search Report and Written Opinion of the ISA/KR (7 sheets)
- 4) Second copy of the published International Application
- 5) Filing Fee Check
- 6) Return Receipt Postcard

I hereby certify that I directed that the attached paper or fee be deposited with the United States Postal Service "Express Mail Post Office to Addressee" Service under 37 C.F.R. 1.10 on the date indicated above and be addressed to Mail Stop PCT, Commissioner for Patents, PO Box 1450, Alexandria VA 22313-1450.


Robert J. Irvine, Reg. No. 41,865